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TEMPLE CLAYTON, CHEMIST AND AMATEUR BOTANIST, 1914–1978

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THE FIELDS of natural history and botany have always had among their ranks rather large numbers of interested and enthusiastic amateurs. In botany, at least, these people have devoted themselves whole-heartedly and often in a most professional manner to a pursuit that was actually a hobby, not the effort from which they derived their livelihood. In the past and even now, many amateurs have been and are much concerned with monocotyledonous plants, especially members of such families as the Bromeliaceae, Liliaceae, and Orchidaceae—all taxonomically and horticulturally difficult families with species scattered in often remote, hard-to-reach, tropical areas. Temple Clayton was one of those dedicated amateurs and had a tremendous interest in the Dioscoreaceae, or family of the true (tropical) yams.

Born in Andover, New Hampshire, on August 19, 1914, Temple Clayton died at White Bear Lake, Minnesota, on November 10, 1978. His early schooling (1927–1931) was at the Tilton Preparatory School, Tilton, New Hampshire. From there he went to Cornell University, where he majored in chemistry and received the bachelor of chemistry degree in 1935. He then went to the New York City area, where, while working as a chemist for various companies¹ and teaching chemistry,² he also did graduate work at Columbia University, receiving the M.A. degree in 1941. From June, 1944, to August, 1954, Mr. Clayton was employed as a group leader by the Schering Corporation, a pharmaceutical firm in New Jersey with interests in natural products. Through his work involving chemical constituents of the underground parts of various species of *Dioscorea*, he became interested in the plant sources. (He had earlier

¹September, 1935–June, 1936, as research chemist for Kessler Chemical Corp.; August, 1936–February, 1937, as chemist for Carleton Ellis.

²First (February, 1937–June, 1938) at Newark College of Engineering, then (September, 1938–June, 1944) at Cooper Union.



TEMPLE CLAYTON
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become interested in plants through the influence of his uncle, the late A. Le Roy Andrews, professor of Germanic philology at Cornell, but well known for his interest in plants and as an American authority on mosses, particularly the genus *Sphagnum*.) As an intellectual adjunct to his chemical work, Temple Clayton plunged from a rather casual concern with local flora to a serious study of a botanically difficult plant family. He pursued this activity mostly on his own time, but with travel support from the Schering Corporation, botanical support from the New York Botanical Garden, and some technical assistance and serious interest from the U. S. Department of Agriculture.

In November, 1954, Temple Clayton went to work for the 3M (Minnesota Mining and Manufacturing) Company, where from the time he arrived until July, 1962, he worked in the Central Research Laboratories, first as a literature chemist then as a patent liaison. From August, 1962, until his death in 1978,

Specimens of Dioscoreaceae
From the Collections of Temple Clayton
Presented to the Arnold Arboretum of
Harvard University by the
Herbarium, Department of Botany,
University of Minnesota, St. Paul, 1979

Photographs of Dioscoreaceae
From the Collections of Temple Clayton
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Above: label to be used on Temple Clayton's herbarium specimens. Below: label to be used on his photographs.

he was employed as a patent agent in the Office of Patent Counsel of 3M. Mr. Clayton was admitted to practice before the United States Patent and Trademark Office, and he was a member of the Minnesota Patent and Trademark Law Association.³

During his 24 years in Minnesota, Mr. Clayton continued his interest in the Dioscoreaceae, supported by the encouragement of Gerald Ownbey, professor of botany and curator of the herbarium at the University of Minnesota, St. Paul. So far as I can tell, it was during this period that Temple Clayton formulated most of his ideas about the reorganization of the family Dioscoreaceae—work for the most part written up, sometimes roughly and sometimes in more finished form, but none of it published. He had, however, annotated specimens in many herbaria with unpublished names.

He photographed every specimen he had on loan from European herbaria, proposed a whole new classification for the family Dioscoreaceae and its components, wrote detailed descriptions for a large number of new taxa at various levels, and made sketches illustrating significant characters of the plants. He accumulated a vast bibliography, a good study collection of specimens, and a knowledge of theoretical approaches to taxonomic matters that was, to say the least, surprising.

At Temple Clayton's death, all the materials were given to the herbarium of the Department of Botany, University of Minnesota, St. Paul, by his wife, Emma G. Clayton. However, Professor Ownbey thought that the facilities and area of specialization there were not the best for materials concerned with an

³From a letter of Mr. Donald C. Gipple, senior patent attorney, 3M Co., March 1, 1982.

important group of tropical plants, and they were transferred to the Arnold Arboretum of Harvard University in 1979. Organizing the specimens and photographs to make them easily available and most useful has been a rather lengthy process, due to lack of continuous time, not lack of interest. The specimens (some mounted and some unmounted; some determined, some named as new, and some sterile and unidentifiable or represented by cultivated material grown by the U. S. Department of Agriculture) have been inventoried. Before being mounted, each specimen and photograph will have a special label affixed indicating the source and date of the gift. Duplicates will be made available to institutions whose collections were studied, as well as those with special interest in the Dioscoreaceae.

The acquisition of the Temple Clayton dioscoreaceous reliquiae has proven to be an interesting and somewhat awesome experience. The items making up the collection comprise the results of about 30 years of devoted attention to a fascinating avocation for which Mr. Clayton was basically untrained. I make this last remark not in a sense of judgment, which is not my purpose here, but in a sense of wonder that he accomplished such a large amount of time-consuming work and made so many meticulous observations in spare hours.

Although the materials were turned over with "no strings attached," Temple Clayton's friends and colleagues in Minnesota hoped that something publishable might be found that could bear his name as author. There is little doubt that some of the species he indicated as new, and for which he wrote descriptions and annotated specimens, were indeed undescribed. To be as certain as possible, I enlisted the collaboration of Dr. Franklin Ayala, director of the Herbarium Amazonense, Iquitos, Peru, and also a student of Dioscoreaceae, to study some of the material with me. In the short time we had to work together, we chose four species from among those left by Temple Clayton; these will be published in a separate paper.

My acquaintance with Temple Clayton extended over a long period, starting before he left New Jersey for Minnesota, when he was studying plant material at the New York Botanical Garden and visiting the (then-called) Plant Industry Station of the U.S.D.A. at Beltsville, Maryland, to see some of his own material growing in the greenhouses. He was generous about sharing with me materials he had on loan from Europe, as well as information as he acquired it on Dioscoreaceae. He was an interesting, enthusiastic person, very serious about his chief interests, with an amiable personality and boundless energy. I trust that my colleagues and I will be able to do justice to some of the results he left unpublished.

For the photograph and other useful information I am indebted to Mrs. Emma G. Clayton; for other data, to Mr. Donald C. Gipple, of the 3M Company; and for the privilege of having the material presented to the Arnold Arboretum of Harvard University for my study, to Dr. Gerald B. Ownbey.

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